ABSTRACT

Molecular tools for differentiating normal breast tissue and cells from cancerous breast tissue and cells are provided The tools are derived from a novel tumor suppressor gene which encodes a protein referred to hereinafter as the "EDG1" protein. One tool is an isolated polynucleotide which encodes the EDG1 protein. The other tool is an antibody which is immunospecific for the EDG1 protein. Methods of detecting cancerous cells which employ the antibody and polynucleotide are also provided. Methods for decreasing proliferation of breast cancer cells, prostate cancer cells, testicular cancer cells, and ovarian cancer cells are also provided. Such method comprises increasing levels of the EDG1 protein in such cells